MULTIMEDIA UNIVERSITY

STUDENT ID NO | | | | | | | | | | |

MULTIMEDIA UNIVERSITY

SUPPLEMENTARY EXAMINATION

TRIMESTER 1, 2015/2016

DCS 5018 – COMPUTER SYSTEMS AND APPLICATIONS

(DIT & DBIS Students only)

17 NOV 2015
2.30 PM – 4.30 PM
(2 HOURS)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of **EIGHT (8) pages** (excluding the cover page).

2. There are **THREE (3) sections** in this Question paper. Answer **ALL** questions.

   Section A: Multiple Choice Questions, Questions 1 - 20 (20 marks)
   Section B: TRUE / FALSE, Questions 21 - 40 (20 marks)
   Section C: FOUR (4) Structured Questions (60 marks)

3. For **Section A and B**, answer **ALL** questions on the OMR sheet provided.

4. For **Section C**, please write all your answers in the **Answer Booklet** provided.

Section A: Multiple Choice Questions (Total: 20 Marks)

Instruction: Please mark your answers on the OMR sheet provided.

1. Which is **NOT** a factor to consider when buying a monitor?
   A. Resolution
   B. Weight
   C. Size
   D. Brightness

2. Which type of computer is suitable for large insurance companies, where many agents are working at the same time on claims processing?
   A. Mainframe
   B. Embedded computer
   C. Supercomputer
   D. Tablet

3. Which of the following devices is used to transform data into information?
   A. Central processing unit (CPU)
   B. Keyboard
   C. Hard drive
   D. Monitor

4. _____ requires contributors to provide real names and sign an ethics pledge, and all postings are monitored.
   A. Wikipedia
   B. Citizendium
   C. Wordpress
   D. Really simple syndication (RSS)

5. In the Web address *http://www.thestar.com.my/Topics/Ramadan,* the domain name is _____.
   A. .com
   B. http
   C. www.thestar.com.my
   D. Topics/Ramadan

6. Which is a drawback of *bookmarks* and *favorites* feature in Firefox and Internet Explorer browser respectively?
   A. Easy way to return to a specific web page.
   B. Great for quickly locating those sites you use most.
   C. Accessible only when you're on your own computer.
   D. Tools to create folders to organize the sites into categories are available.

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7. All of the followings are software suite **EXCEPT** _____.

   A. Microsoft Office
   B. Apple iWork
   C. Apache OpenOffice
   D. Internet Explorer

8. Which of the following is the last step in the boot process?

   A. The OS is loaded into RAM.
   B. The BIOS checks that all devices are in place.
   C. The BIOS is activated by turning on the computer.
   D. Configuration and customization settings are checked.

9. Which of the following is the correct file extension for Microsoft Excel file?

   A. inventory.wpd
   B. inventory.pdf
   C. inventory.xlsx
   D. inventory.accdb

10. Which of the following does **NOT** determine processor power?

    A. Amount of cache memory
    B. Clock speed
    C. Speed of the motherboard
    D. Use of multiple cores

11. The statement below refers to:

> "An expansion card that's installed inside a system unit to translate binary data into the images viewed on the monitor."

    A. Video card
    B. Sound card
    C. Optical drive
    D. Solid state drive

12. Which type of network provides Internet access within Multimedia University campus?

    A. Wide Area Network
    B. Metropolitan Area Network
    C. Local Area Network
    D. Personal Area Network

13. A _____ is used to transfer data packets between two or more networks.

    A. hub
    B. router
    C. switch
    D. firewall

14. Which of the following is **NOT** considered as Internet broadband connections?

    A. Dial up
    B. ADSL
    C. Satellite
    D. Cable

Continued.....

15. In what ways can outsiders try to infect your computer system?

A. Viruses in e-mails.
B. Contaminated USB drives.
C. Insecure downloads from the Internet.
D. All of the above.

16. Which of the following is **NOT** a guideline for creating strong passwords?

A. Create a hard-to-guess password.
B. Change your password from time to time.
C. Use a different password for every of your account.
D. Keep your written password in your desk drawer.

17. A(n) _____ is included in a cell phone to handle the compression of data in order for it to be quickly transmitted to another phone.

A. analog-to-digital converter
B. digital signal processor chip
C. modem
D. compression utility

18. Your mobile device files can be synchronised using _____.

A. a cloud service
B. HDMI
C. a display adapter
D. a secure digital transmission

19. _____ is the process of translating a task into a series of commands that a computer will use to perform the task.

A. Debugging
B. Programming
C. Analyzing
D. Diagramming

20. Before its final commercial release, a(n) _____ version of software may be offered to certain test sites or to interested users.

A. gamma
B. release to manufacturers (RTM)
C. beta
D. general availability (GA)

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Section B: True / False (20 Marks)

*Instruction: Please mark **A** for True statements and **B** for False statements in the OMR sheet provided.*

21. Information is a representation of a fact, or figure, or idea that can be a number, a word, a picture, or even a recording of sound.
22. While a client computer puts out a request for information, the request travels along the transmission lines which are referred as Internet backbones.
23. Adobe Reader plug-in enables you to view PDF files.
24. Computer-aided design software is used by web designers to create websites.
25. In order to remove all the changes made to your system, the Windows refresh utility returns your computer to the state it was in when it came from the factory.
26. Files are stored in a hierarchical structure of directories that includes files, folders, libraries, and drives.
27. Microsoft OneNote is a popular note-taking and organizational tool you can use for research, brainstorming, collaboration and organization.
28. You can use the Windows error-checking to check on a nonresponsive program.
29. Dolby Digital 5.1 requires a total of five speakers.
30. In a network, actual data throughput is always higher than the data transfer rate.
31. Using your computer for non-work activities while you are being paid to work is known as cyberbreaking.
32. Digital rights management allows only limited use of media that have been legally purchased.
33. A consistency check would be used to restrict the fines for speeding violations from RM50 to RM250.
34. In a transaction-processing system (TPS), if the TPS database can be queried and updated while the transaction is taking place, this is called real-time processing.

Continued.....

35. Quarantining procedure performed by the antivirus software means updating your antivirus software.
36. Object-oriented databases are the most frequently used electronic databases.
37. The capability of moving a completed programming solution easily from one type of computer to another is known as portability.
38. The most common file types supported by digital cameras are raw uncompressed (RAW) data and joint photographic experts group (JPEG).
39. A syntax error is caused by not following the strict, precise set of rules for a specific programming language.
40. Artificial intelligence is the branch of computer science that attempts to create computers that think like humans.

Section C: Structured Questions

Instruction: Please write all your answers in the Answer Booklet provided.

QUESTION 1: [Total: 15 Marks]

a) Describe how computers represent data in binary language. [2m]

b) You are deciding whether to buy an external hard drive or flash drive for your additional storage need. In a table, compare the advantages of external hard drive and flash drive in order to help you decide your preferred storage option. [3m]

c) E-commerce (electronic commerce) is the process of conducting business online for purposes ranging from fund-raising to advertising to selling products. Briefly define the **THREE (3)** types of E-commerce business models. [5m]

Continued.....

d) Jason finds that his new laptop's performance degrades after he opened an e-mail attachment forwarded from his friend. He also cannot access any USB drive that he plugged in. He suspects that the laptop is infected with a malware but his antivirus software did not find anything during a scan.

a. What is the most possible type of malware that infected Jason's laptop? [1m]

b. Provide **TWO** (2) reasons the malware was not detected during the scan. [4m]

QUESTION 2: [Total: 15 Marks]

a) Write the correct category of application software for each of the following software: [5m]

Software	Category Software
i. Microsoft Excel	
ii. Adobe Dreamweaver	
iii. AutoCAD	
iv. Microsoft Outlook	
v. MAGIX Music Maker	

b) Match the following definitions with the correct terms from the table below:

Kernel	Virtual memory	Swap file	Spooler	Paging

i. The process of swapping data between RAM and a swap file. [1m]

ii. The space on the hard drive where the operating system stores data if there isn't enough random access memory to hold all of the programs currently trying to run. [1m]

iii. A program that helps coordinates all print jobs being sent to the printer at the same time. [1m]

iv. The essential component of the operating system that's responsible for managing the processor and all other components of the computer system. [1m]

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v. A temporary storage area on hard drive where the operating system moves the data or instructions from random access memory that haven't recently been used. [1m]

c) Mindy is an avid gamer who likes to play video game on her desktop. However, she does not really enjoy playing the latest game as the integrated graphic in her system only allows low resolution output.

i. What is your suggestion for Mindy to significantly improve the performance with minimum cost possible? [1m]

ii. Provide **TWO (2)** reasons for the suggestions. [4m]

QUESTION 3: [Total: 15 Marks]

a) Suggest the best type of memory used in computer to define the following statements:

i. The computer's temporary storage space or short term memory. [1m]

ii. Small blocks of memory, located directly on and next to the central processing unit (CPU) chip, that act as holding places for recently used instructions or data that CPU accesses the most. [1m]

iii. Random access memory that's included as part of a video card. [1m]

iv. The amount of random access memory (RAM) that's installed in a computer. [1m]

v. A set of memory chips, located on the motherboard, which stores data and instructions that cannot be changed or erased. [1m]

b) Define and briefly explain the following level of network administration in network architecture. Provide an example for each.

i. Central administration [2.5m]

ii. Local administration [2.5m]

Continued.....

c) Before the product is officially released, it is essentially in the testing and documentation stage of the program development life cycle (PDLC), in which a program is thoroughly tested to ensure it produces the right results. Briefly explain **TWO (2)** types of testing process used in these phase? [5m]

QUESTION 4: [Total: 15 Marks]

a) Differentiate between virus and worm behavior based on the following:

i. How it is spread to other devices? [2m]

ii. How it is activated or executed? [3m]

b) Bella wants to enter photography competition. In order to help her select quality photo for the competition, explain the factors to determine the quality of image captured. [5m]

c) You are working as an information system specialist in a private hospital. The management in the hospital wants to implement Database Management System (DBMS) to replace the simple lists created in Microsoft Word and Microsoft Excel. List **TWO (2)** weaknesses of list compare to database. [2m]

d) A business organization needs different types of information systems to support different management levels. Discuss the purpose of the following information systems. [3m]

i. Transaction processing systems

ii. Management information systems

iii. Decision support systems

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